

THE
BOSTON MEDICAL AND SURGICAL
JOURNAL.

VOL. VI.]

WEDNESDAY, JULY 4, 1832.

[NO. 21.]

CHLORITE OF POTASSA.

On the Chlorite of Potassa. By WILLIAM TULLY, M.D. Prof. Mat. Med. and Therap. in Yale College.

Communicated for the Boston Medical and Surgical Journal.

IN that part of the country in which I commenced the practice of medicine, the salt formerly called OXY-MURIATE OF POTASSA, HYPER-OXY-MURIATE OF POTASSA, and HYPER-OXYGENIZED-MURIATE OF POTASSA, was considerably employed as a remedial agent. On reference to those works upon materia medica which treated of it, I (even then) found the following statements in regard to its powers and applications, and the same still maintain their place in all the subsequent editions of the same books, without either diminution, extension, or alteration.

According to DUNCAN, this salt "always acts as a stimulant, and sometimes as a diuretic." "In some cases, in which it produces little or no effect, it passes off undecomposed in the urine." "Some years ago, it was strongly recommended as an antisyphilitic remedy," and "its use was extended to other cutaneous diseases, and to fevers, as a general stimulant." "Its dose is from three to ten grains, gradually increasing to twenty-five or thirty, four times a day." "At one time many singular cures, performed by its means, were recorded, but it has fallen into disuse," etc.—(See *Duncan's Dispensatory*, article "*Aqua Alcalina Oxy-Muriatica*.")

According to MURRAY, "as a remedy, hyper-oxy-muriate of potassa may be classed with nitric acid," which is placed among the tonics. "It was the hypothesis of nitric acid's acting medicinally, by imparting oxygen to the system, that led to its use." "This salt contains a large quantity of oxygen, which is not retained in it by a strong affinity." "Its operation, in checking or removing the symptoms of syphilis, is similar" to nitric acid. "It increases the force of the circulation, and excites the actions of the system." "Its efficacy as an antivenereal remedy was inferred, from the trials made of it, to be superior to that of nitric acid; yet it does not appear to be equally advantageous as an auxiliary to mercury." "Its operation alone cannot, however, be relied on for certainty, and, as it frequently fails, it is little employed; while nitric acid still continues to be used, with the views already stated."

"The dose in which the oxy-muriate of potassa has been given is ten grains, three or four times a day, and increased gradually to twenty or twenty-five grains."—(See *Murray's Materia Medica*, article "*Potassa Oxy-Murias*.")

SWEDIAUR says of this article—"Virtutes: oxygenans; motum systematis arteriosi augens." "*Usus*: asthenia; scorbutus; cachexiæ; hepatitis-chronica; syphilis? morbi cutis?" "*Doses*: grana xv.—lx. de die."—(See *Swedæur's Materia Medica*, article "*Murias Hyper-Oxygenatus Potassæ*.")

COXE, in his *Dispensatory*, copies DUNCAN verbatim; and GRAY, in his *Supplement to the Pharmacopœias*, says—"Stimulant gr. i.—ij.," which is also copied by COXE.

Briefly stated, the sum of all these accounts is, that this salt oxygenizes the system, is antisyphilitic, antiscorbutic, antipsoraic, diuretic, febrifuge, antispasmodic, and general stimulant.

With these notions, therefore, I first entered upon the use of this salt in my medical practice, beginning with it in spasmodic affections, such as hysterica—next using it in cutaneous diseases, more particularly psoriasis and impetigo—afterwards in syphilis, and finally in the secondary and latter stages of moderately atonic continuous fevers; but, in all these cases, without any perceptible effects of any sort, except a slight increase of the urinary excretion, altogether too inconsiderable to be of any utility in the treatment of any disease. It is to be remarked, however, that my doses never exceeded half a drachm, four times a day. I now discontinued its employment for some time, but was again induced to use it from the following circumstances. One day, while reading MURRAY's doctrine, that "substances containing a large proportion of oxygen, especially in a loose state of combination," are refrigerants—i. e., according to MURRAY, "such medicines as diminish the force of the circulation"—it occurred to me, that this article might be a pure antiphlogistic remedy, instead of a stimulant. Thus, if the refrigerants operate by imparting oxygen to the system, those articles which contain the most oxygen, and part with it the easiest, are the most powerful refrigerants. Now, as this salt contains as large a quantity of oxygen as any known medicinal substance, and as it parts with it even more easily than any other, it ought to be the most powerful refrigerant, or antiphlogistic agent, which we possess. I resolved to verify or disprove this, the first opportunity; and accordingly, in the first supposed phlogistic disease which came under my care, I entered, after bleeding, upon its use, with the utmost caution and circumspection, much as I suppose our predecessors first tried the cool regimen in the smallpox. Not, however, perceiving any effect from small doses, I soon increased to the quantity of a drachm, four times in the twenty-four hours, and with the certainty that it did not aggravate a single symptom; but, as I thought, it abated, in a moderate degree, all the symptoms of the disease. In these doses, and with these periods of repetition, however, it seemed to be inferior to the nitrate of potassa, in the doses, and with the periods of repetition, with which I had been accustomed to use that article. Partly, therefore, from this circumstance, and partly

from its scarcity and cost, but more especially from the disappearance of all phlogistic diseases from the sphere of my practice, I soon entirely discontinued the medicinal use of this salt.

A few years afterwards, during the prevalence of an epidemic typhus where I resided, this salt was highly recommended to me, as an antemetic, by a professional gentleman in whose opinion I reposed great confidence. It was of course particularly recommended as an effectual remedy for the irritability of the stomach, with troublesome nausea and vomiting, which attended some of my cases of the epidemic typhus above mentioned. I accordingly made fair trial of it in these cases, both in doses of two or three grains and in doses of half a drachm, as well as in various intermediate doses; but, so far as I could judge, without any benefit from it in any case, and, in those in which I employed the largest quantities, with a decided aggravation of the very symptoms which it was expected to relieve.

This salt was again abandoned, as a remedial agent, till a few years afterwards, when it was again tried, in a few cases, for the purpose of relieving the nausea and vomiting attendant upon some instances of a low, malignant typhus. Here it could not be given in any quantity sufficient to produce perceptible effects, without aggravation of these very symptoms; and such had been previously ascertained to be the fact with all pure antiphlogistic agents in similar cases of this disease, particularly vegetable acids, neutro-saline effervescing mixtures, and the refrigerant salts generally.

From that time till within a few years, I neither used nor scarcely thought of this salt. Recently, however, knowing of its recommendation and employment in certain neuralgic cases (though, as far as I have obtained accurate information, without any certain benefit), my attention has again been called to its medicinal powers; and, in consequence of an application from a medical student, that I would suggest an article of the materia medica, as a subject of experiment, for the purpose of a dissertation inaugural to the degree of M.D., I named this agent. The experiments were all made in my office, and under my immediate superintendence; and, indeed, I was myself one of the subjects of them.

EXPERIMENT I.—January 7, 1832, E. J. D., in perfect health, and of ordinary susceptibility to the impression of medicine, but with his pulse at 96 in a minute (which was an accidental increase of about 24 beats), took, at three o'clock, P. M., a scruple of this salt. In half an hour the pulse was reduced in frequency to 80, and in an hour to 68, which was about four beats less than natural. No other effects were perceived.

EXP. II.—January 11, at seven o'clock, P. M., pulse at 72, its natural state, a drachm of this salt was taken. There was no subsequent effect, either upon the pulse or any other function, and no change whatever in any sensation.

EXP. III.—January 16, at seven o'clock, P. M., pulse at 76, half an ounce of the salt was taken; but it produced no effect subsequently, except a considerable diminution of appetite, and much flatulence, for several days.

Exp. IV.—January 21, at 4 o'clock, P. M., pulse at 80, an ounce of the salt was taken. In an hour, the pulse was reduced in frequency to 64. In another hour, the pulse was found varying from 56 to 65, a little exertion or motion instantly raising it to the latter number, and quiet for a sufficient time reducing it to the former. It was at the same time considerably smaller and weaker. In another hour—i. e., at seven o'clock, P. M.—the pulse, as respects strength and fulness, remained stationary, but its medium frequency was 64. At eight o'clock, the pulse remained as at seven. Shortly after this last dose of the salt was taken, a sensation of weight, fulness, and distention, in the epigastric region, began to be felt, which regularly and gradually increased, and was attended with a sensation of twisting, till about ten o'clock, P. M., when it had become so inconvenient, that about two fluid ounces of French brandy were taken, which, as was expected, greatly relieved it. Through the whole afternoon there had been also a very troublesome degree of flatulence, which increased with the other symptoms, and continued after they were relieved. There was likewise a moderate degree of cardialgia. Sleep, the night following, was much as usual; but, on the succeeding day (Sunday), there was a recurrence of the load and distension in the epigastrium, and of the sensation of twisting, which now amounted to rather severe pain, but which subsided, without medication, toward night. On the next day still following (Monday), these symptoms again recurred, and to such a degree as in fact to require medical relief. In the course of Tuesday, the same symptoms still continuing, three doses of opium, of a grain each, were taken at different times, with the desired effect, viz., the production of relief. On Wednesday, one grain of opium proved sufficient, and subsequently no more was taken, though much flatulence, and, at times, considerable uneasiness in the epigastrium, with deficiency of appetite, continued through the week. Indeed, whenever food was taken, even in very moderate quantity, it had a strong tendency to produce disturbance and distress; and, for several weeks following, the subject of these experiments had *proetica marisca*, which he had never experienced before. It should have been before stated, that, in the course of the afternoon and night after the last dose of the salt was taken, there was a considerable increase of the urinary discharge, which was at an end the next morning.

Exp. V.—January 7, 1832, at three o'clock, P. M., W. N. B., in perfect health, and of ordinary susceptibility to the impression of medicine, with his pulse at 72 in a minute, and slightly irregular (which is its natural state), took a scruple of this salt. This dose produced no perceptible change in the sensations, no change in the pulse, and no change in the state or condition of any of the functions.

Exp. VI.—January 11, at seven o'clock, P. M., pulse at 72, in other respects natural, a drachm of the salt was taken. No effect of any sort was subsequently perceived from this date.

Exp. VII.—January 16, at seven o'clock, P. M., pulse at 76, but perfectly natural in other respects, half an ounce of this salt was taken. In half an hour, no effect was produced; but, an hour or two subsequently, the pulse was evidently diminished considerably in force, and

also reduced about ten beats in frequency. In the course of the evening and night following, there was an obvious increase of urine, but no other perceptible effect. The sleep was perfectly natural, so far as was noticed. On the morning of the day following (January 17), a strong sense of weight and distension was perceived in the region of the stomach, with deficiency of appetite, and flatulence. These symptoms continued, in a variable and fluctuating degree, through the 18th and 19th, so that animal food could not well be taken. On the 20th, they were so much mitigated as to admit of a dinner of meat; but they had not entirely disappeared on the 21st, when the eighth experiment was made.

Exp. VIII.—January 21, at four o'clock, P. M., the pulse at 72, and in other respects natural, an ounce of the salt was taken. In an hour, the pulse was reduced in frequency to 56 in a minute, and was considerably smaller and weaker than natural. In another hour (six o'clock, P. M.), the pulse was still 56, when perfectly quiet, but, by a little exertion and motion, it would rise to 64. In other respects, it remained as at the last hour. At seven o'clock, the pulse was still at 56, and the same in other respects. At eight o'clock, the pulse was only 48 in a minute, and was even still smaller and weaker. In the course of the last hour there was a copious alvine evacuation, which resembled the operation of a full dose of a refrigerant purging salt. It is to be observed, that during the same day there had been the customary natural evacuation from the intestines. Between eight and nine o'clock, walked about an eighth of a mile, and immediately, on returning, felt a severe, heavy, and oppressive pain, and a sense of sinking in the stomach, so urgent as to require speedy mitigation. At this time, the pulse was only 36 in a minute, and there was moderate sweating. Now took two fluid ounces of undiluted French brandy, which gave immediate relief, that continued through the night, during which the sleep was quiet. On the morning of the 22d, a sense of weight, with some pain, was again felt in the region of the stomach, for which an ounce of undiluted French brandy was taken, with immediate benefit; and, apparently in consequence of this, the appetite for breakfast was much as usual, and the customary quantity and kind of food was accordingly taken. But soon after breakfast the same symptoms began to return, and they gradually increased till about eleven o'clock, A. M., when they had become so severe as again to require medical relief. At this time, about a grain of opium was taken, which was productive only of moderate and temporary respite; for after no very long time the same sense of weight and distension in the stomach, and the same pain, were again urgent. At twelve o'clock, M., half a tumbler of wine was taken, with as much relief as to allow of the ordinary dinner, though, as there was considerable thirst, an unusual quantity of water was taken with it. Before long, however, the old symptoms returned, and they soon increased to such a degree, that a dose of opium, about twice the size of the last, was taken, but without any appreciable abatement of the complaint. By two o'clock, P. M., the morbid symptoms had become so urgent, that it was deemed necessary to call on the professional gentleman who superintended the experiments. The exertion and

motion of walking about three fourths of a mile, to his house, very greatly aggravated the distress and pain. It had now extended to the umbilical region, had become lancinating, and extremely severe, resembling neuralgia, and there was tumefaction, hardness, soreness, and intolerance even of the lightest pressure, in both the epigastric and umbilical regions, with inability to sit erect—the whole accompanied with much flatulence, and frequent eructations of air. A free use of opium was immediately entered upon, which soon produced some benefit; but perfect relief was not obtained till about five o'clock, P. M., when full twenty grains of the remedy, accompanied with a little essential oil of cinnamon, had been taken. After this period, when perfect rest was maintained, there was complete freedom from pain; and the tumefaction, hardness, and intolerance of pressure, rapidly disappeared. Exertion and motion, however, would produce a slight return of the pain, but in a trifling degree. About nine o'clock, P. M., a moderate paroxysm of vomiting took place, by which, to all appearance, the food taken at noon, and probably considerable of the water which was swallowed with it, were rejected in a partially digested state. Not very long after this, went to bed, and had a perfectly quiet and comfortable night's rest, and on awaking, on the morning of the twenty-third, felt entirely well. On getting up and dressing, however, experienced some vertigo, but not sufficient to prevent walking three fourths of a mile to lodgings. On arrival there, again felt vertigo, and lay down on a bed. After a little rest, felt completely recovered, and at dinner had a good appetite, though indulged it moderately. At supper time, was so well as to crave and take animal food, after which, spent the evening in study and writing. No trace of indisposition of any sort was perceived the ensuing week. It is worthy of remark, that though there was no alvine evacuation on the twenty-third, yet that, early on the twenty-fourth, a natural one took place, and there was no subsequent derangement of this function.

Exp. IX.—January 7, 1832, at three o'clock, P. M., a professional gentleman, in perfect health, and of ordinary susceptibility to the impression of medicine, took a scruple of this salt. At the time the salt was taken, his pulse was at 72, and perfectly natural in every respect. This dose produced no change whatever in the pulse, though it was repeatedly examined at various intervals; and none took place in the sensations, or in the excretions.

Exp. X.—January 11, at seven o'clock, P. M., pulse at 72, a drachm of the salt was taken. At no time subsequently was there any change in the pulse, sensations, or excretions, that could possibly be attributed to the salt.

Exp. XI.—January 16, at seven o'clock, P. M., pulse at 76, half an ounce of the salt was taken. No effect was subsequently produced upon the pulse, except, perhaps, a moderate diminution in force and fulness, though this was so inconsiderable as to leave a doubt whether the salt had any instrumentality in the change. Other effects, however, were obvious. Within an hour from the swallowing of the salt, a sensation of weight and oppression in the stomach, almost amounting to pain, commenced, and this was accompanied with slight, but constant

cardialgia, and considerable flatulence. During the night, the urinary excretion was nearly doubled, and the symptoms just described were increased so much as nearly to prevent sleep. The day following, the same sense of weight or oppression at the stomach continued, but in a diminished degree; the cardialgia disappeared, but the flatulence was rather augmented. The appetite was much diminished, and there was torpor of the intestines, indicated by costiveness, which was immediately attended with a moderate degree of proetica marisca, with which the subject of the experiments had previously been but rarely affected. It was at least three days before the stomach and alvine canal recovered their wonted condition, and even then a slight degree of proetica marisca remained.

EXP. XII.—January 21, at four o'clock, P. M., pulse at 72, an ounce of this salt was taken. Under the influence of this dose, there was no subsequent change in the frequency of the pulse, but there was an obvious and unequivocal diminution, both in its fulness and force, commencing within an hour, and continuing through the evening and night. The same sensation of weight and oppression, that has been previously described, also took place within an hour, but in a considerably greater degree than before; and it was likewise accompanied with more cardialgia, and more flatulence. In the course of the evening, and about three hours from taking the salt, the sensation of weight and oppression, in the region of the stomach, increased to a steady and uniform gravative pain, which at last became so urgent, that a grain of opium was taken. Just about the time the opium was taken, there was nausea, and four or five efforts to vomit, though nothing but air was ejected. During the evening, there was frequent micturition, and a discharge of nearly double the quantity of urine, with considerable of that sort of irritation about the bladder and urethra, which the subject of the experiment distinctly recollects having formerly experienced, not only from nitrate of potassa, but also several times from the carbonate of potassa, when he has used it freely. The grain of opium, in the course of about an hour, much relieved the immediate urgency of the pain in the stomach, but did not by any means remove it. As in each previous experiment the salt had been taken upon an empty stomach, so in this all supper was omitted till between nine and ten o'clock, P. M., when half a dozen wine biscuit, with about two fluid ounces of brandy, diluted with water, were taken. The brandy was used because the gastric distress had again amounted to so much pain as to require some mitigation, which it gave, in about an equal degree with the grain of opium that had been previously taken. Between ten and eleven o'clock, P. M., the subject of this experiment went to bed, but was unable to sleep for several hours, on account of the flatulence and the gastric distress. About midnight, the same sort of pain in the stomach, as above described, had increased to such a degree as again to require relief, and there was likewise a strong sensation of weight and tension in the umbilical region, with considerable pain, much resembling the commencement of colica ileus, or common colic. At this juncture, two and a half grains of opium were taken, which, in the course of an hour, reduced the symptoms, in the epigastric and umbilical regions, to the sensation of

load and oppression, which had not disappeared since their commencement. From about two o'clock to six, A. M., the subject of this experiment slept well, but then awoke with the same sensations about the stomach and abdomen. At breakfast, had little or no appetite, but, nevertheless, ate moderately. For three or four days subsequently, it was necessary to take about three or four half-grain doses of opium daily, because, without, there would be a return of flatulence, sense of distension, oppressive weight, and even considerable pain, both in the epigastric and umbilical regions, and this to quite an inconvenient extent. Even to the end of the week, more or less of the same symptoms would constantly occur, unless subdued by a little opium; and during the whole of this time, there was deficiency of appetite, except when under the influence of a moderate quantity of opium. It is worthy of remark, that although no costiveness followed this last dose of the salt, and none was produced by the little opium which was taken, yet a troublesome degree of proetica marisca took place immediately, and had not subsided by the first of February. The fæces were lighter colored than natural during this period. It is also worthy of remark, in this case, that neither the opium nor the brandy produced any of the ordinary operative effects that might have been expected, had they been taken by a person perfectly well, and not under the influence of any other medicinal agent. The subject of this experiment well knows, from repeated trials formerly made, that he could not have taken three and a half grains of opium, in the manner which he did at first, without vertigo, headache, nausea, etc. the next day, unless where there was disease, for the relief of which, the force of the opium should be spent; or where some counteracting agent to the effects of opium had possession of the system. It may be necessary to mention here, that the weight employed for the doses of this salt was Troy weight, and not Avoirdupoise, which latter, I believe, is generally used by druggists, in many parts of our country, for all quantities above two drachms.

These details are taken verbatim from the dissertation of which they are a part.

It is believed that these twelve experiments, made upon three different individuals, with a successive increase of the doses, the same doses being given to each individual respectively, will be considered as throwing all the light upon the operation of this article, in single full doses, that can be obtained with safety, upon persons in health; and that the effects of single full doses fairly show its analogy to other better known articles of medicine, by which we can readily arrive at highly probable conclusions, in regard to its effects when given in small doses, at regular and short intervals, and its use persevered in for a considerable time. It will be obvious, that it could not well be taken in this latter way by persons in health. I believe I may add, too, that a correct judgment may be formed as to the sort of effects which this article will produce in disease, from its operation in health, though the degree of effect in different diseases cannot be thus estimated. In diseases attended with a morbid increase of susceptibility to the impression of medicines of this sort, far less may prove operative; while in diseases of an opposite character, in this respect, far more may be required: but it certainly

appears to belong to a class of agents, whose effects, both in health and in disease, agree at least in kind.

Some further remarks on these experiments, will form a paper in the next number of this Journal.

REMARKS ON CONTAGION.

Communicated for the Boston Medical and Surgical Journal.

WITH the ultra non-contagionists, there is a course of abstract reasoning on which they place much reliance, though to my view it is fallacious in the extreme, and utterly untenable, both in the medical and in the physical world. It is roundly asserted that a particular, *specific effect*, can only be produced by the same *identical cause*. This I utterly deny, the alleged authority of the great Bacon to the contrary notwithstanding. Without noticing all the quibbles concerning the various acceptations of the word *cause*, I will remark, that it is one of the most common laws of nature that a *specific effect*, in different instances, is liable to be produced by an indefinite variety of *occasional causes*. What are more numerous than the causes of death? Combustion may be caused by the communication of flame, of a spark, by friction, by sudden condensation of air, by sulphuric acid, by some kinds of fermentation, &c. Inflammation may be caused by fire, by frost, by mineral acids, and by various other means. The causes of fever are indefinitely numerous. The same will apply to other diseases of almost every description. I have no disposition to deny, that yellow fever, typhus, scarlatina, &c. are often, perhaps most frequently, generated in the localities in which they commit their greatest ravages; but a man must be possessed of a very peculiar mind, who, judging from the evidence before the public, can deny the importation of cholera into Quebec and Montreal.

The dogmas of the ultra contagionists are equally absurd, and are virtually founded upon the same course of false reasoning—the identity of cause. They seem to suppose that disease is an existence of the same kind as an animal or a plant; whereas, it is only a state or condition of existence. In the language of the schools, disease is a *mode*, not a *substance*. All the arguments, therefore, which are derived from the same chain of reasoning, as that opposed to the doctrine of equivocal generation in plants and animals, are inapplicable to the origin of disease.

It is easy to find the extremes, but it is difficult, if not impossible, to fix the dividing line between contagious and miasmatic diseases. Smallpox is at one end, and intermittent at the other. These two complaints appear to be governed by totally different laws, as to their origin, and the usual modes of their continuation and propagation. Perhaps the principal and most obvious difference is, that in smallpox, contagion is generally both a predisposing and exciting cause at the same time; or, more correctly, there is needed no greater predisposition than ordinary susceptibility, to enable contagion to produce the disease. In intermittent, as a general rule, miasm does nothing more than act as a predisposing cause, putting the system into such a state that almost any error in the non-naturals will excite the disease. There are exceptions, undoubt-

edly, since the seeds of contagion occasionally lie dormant for a long time, and perhaps at times become extinct without any apparent effect; and miasm may be so concentrated, that remaining a night, or even a few hours, within its sphere, is almost certain to produce intermittent within a definite time.

The temperament of individuals has a vast influence upon their relative susceptibilities, when they are exposed to the causes of disease. But there are times and seasons, in which there are great variations of susceptibility, not only in individuals, but in whole communities. This is called *epidemic constitution*. When this constitution is very strong, epidemics are inclined to spread rapidly and widely, and almost every complaint becomes tinged with the prevailing malady. The general opinion, since the days of Hippocrates, is, that this constitution, or general predisposition, is owing to the state of the atmosphere. If by condition of the *atmosphere* is only meant a change or state of one or more of the elements with which we are surrounded, it is undoubtedly correct; but if the term is restricted to *air*, it is evidently without foundation. Nothing which can be detected by the barometer, thermometer, hyrometer, eudiometer, or by any other instrument or apparatus, is sufficient to account for epidemic constitution, or to show why one side of a river may be healthy and another sickly. Nor do the variations in the seasons afford a more satisfactory solution. Pestilential diseases, of wide difference, such as plague and cholera, for aught we know, may prevail in every month of the year, and in every habitable spot on the globe.

It will be observed, that these remarks are confined to *epidemics*; the local causes of *endemics* are not now under consideration. Nor are the causes of increasing the virulence of epidemics taken into the account.

Of all the hypotheses which have been started, that which supposes epidemic constitution to be occasioned by an invisible and imponderable fluid, analogous to caloric or electricity, is the most ingenious, and supported by the greatest weight of probability. A very respectable practitioner compares this state of predisposition to a cloud, hanging over one region for a time, and then visiting another; occasionally letting through the rays of the sun in some places, which remain salubrious, with pestilence around them.*

S.

PUBLIC MEDICAL INFORMATION.

Communicated for the Boston Medical and Surgical Journal.

ABOUT fifty years ago, Dr. Jared Potter, though residing in a small village, was decidedly at the head of his profession in Connecticut. An epidemic occurred among children, in which he soon discovered that the warm bath was of eminent service. This information he diffused among his employers, and he was rarely called to a patient without finding a sufficient quantity of hot water, and all the apparatus for bathing, at his hand.

* The author of the above Communication will excuse us for changing his signature, as that he appended to his paper might lead to some confusion in our arrangements.—Ed.

When the spotted fever (so called) prevailed in the county of Litchfield, Connecticut, upwards of twenty years ago, Dr. North (now of New London), profiting by the suggestions of a Mrs. Hulbert, a woman whose name ought always to be mentioned with respect and gratitude, made known to the public that free perspiration, produced by the application of external heat, and the internal use of hot cordial drinks, when employed early, in general would essentially mitigate the symptoms of that formidable disease. While the physicians of her vicinity were losing, *secundum artem*, a third of their patients, under bleeding, vomiting, and purging, Mrs. Hulbert, of herself, cured her family by diaphoretics and cordials. This discovery was invaluable, and probably saved the lives of hundreds. After the people had been taught what to do before the arrival of the physician, and the practitioners had become familiar with the proper treatment, the disease soon lost most of its terrors.

It is the privilege of Americans to think and act for themselves, and our nurses, attendants on the sick, and heads of families, all know something of the management of common diseases, and are in the habit of using more or less medicine; and they frequently cure many light complaints, and know how to meet particular symptoms, without *direct* professional advice. This habit of thinking and acting, with regard to sickness as well as other subjects, in case of the sudden appearance of cholera will unquestionably be of great service. When a person is violently seized with gastric sinking, pain, agues, shrunken extremities, spasms, numbness, faintness, sunken countenance, leaden color of the skin, exhausting vomiting and purging, and other symptoms that threaten the immediate extinction of life, common sense and common observation will generally suggest to our citizens what is necessary to be done.

The patient is to be warmed by blankets, heated bricks, hot flatirons, bottles of hot water, blocks of wood or bits of board heated in boiling water, bags of heated sand,* &c., till free sweating is produced. In some parts of the country, bags of boiled oats, on account of their diffusing a pleasant steam, or bunches of hemlock or pine twigs, heated in boiling water, are preferred. The benumbed and pained parts of the body, and the extremities, are covered with strong mustard paste, or with *bats* of cotton freely sprinkled with pulverised capsicum. Laudanum, peppermint, brandy, and other cordials, are given internally, as freely as the stomach will bear.

In those parts of the country where cold, malignant diseases have frequently prevailed, these processes are now well understood by the people in general, and the physician, on his arrival, is gratified to find that the severest symptoms are already mitigated. Indeed, in many cases he has little more to do than to follow the same measures in a systematic manner, proportioned to the exigencies of the case.

It is owing to this kind of knowledge among the people of New London, that their late disease, so nearly resembling the cholera, has been attended with very little mortality. If the public prints, and the physicians in general, will diffuse the same kind of information in our cities, and in those parts of the country where cold, sinking diseases, have

* Or ashes, which is preferable, as being generally in readiness.—Ed.

not already taught the proper treatment, the people will not be taken by surprise, should cholera appear.

The board of physicians in Boston have set a very humane and laudable example, in giving some of the most valuable information to the public. It is to be wished, that this report may be published in every paper, and be read by every family, in the country. We must look at home for rules of managing cholera, if we expect any success. The faculties of London and Paris, since they lose from a third to a half of their patients, it is obvious, are of no authority, and their reports are of no other service than as beacons, by which we may see and avoid their errors.

The non-professional part of our community, when our country is threatened with sickness, will read and judge for themselves. They will also act for themselves. We have no class of people so ignorant and debased as to be incapable of learning the outline of the treatment of any formidable disease, at least so far as to make them familiar with the process of nursing, and of mitigating casual symptoms. The examples given of Dr. Potter and Dr. North, with scores of others that might be noticed, are ample proof of this point. And should New England be visited with cholera, there can be very little doubt that the plain but able report of the medical board of Boston will be found to be the means of preserving hundreds, perhaps thousands, of our citizens.

It is sincerely to be hoped that no sectional feelings, and no rivalry of medical institutions in the other states, will prevent the diffusion and adoption of a plan of treatment, because it has been discovered and successfully practised in another part of the country. *Negative* experience, and abstract reasoning from favorite hypotheses, are of no weight in opposition to the *positive* testimony of such men as Page, Vaughan, North, and twenty others whose names might be mentioned, who have been in the habit of successfully combating every symptom which is commonly met with in cholera. The extent to which opium, alcohol, capsicum, and various other remedies, may be safely carried, in many painful, cold, torpid affections, is no where to be learned in foreign books. Here European knowledge and experience are very defective, as is evident from all the reports concerning the practice in cholera. After reading much upon the subject, the present writer can confidently assert, that he has not, in a single instance, found a report of practice in cholera sufficiently energetic for a moderate case of sinking typhus. Were we to employ as desultory and inefficient medication, in many of our cold and sinking epidemics, as that which is considered as the boldest practice in Europe, we should undoubtedly lose a third or a half of our patients.

T.

 BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON, JULY 4, 1832.

MASSACHUSETTS REPORT ON CHOLERA.

WE recur to this production for the purpose of a short notice of some of the grounds taken by the Committee.

In regard to contagion, we remarked last week that the Committee did not deem the past history of the disease sufficiently full to warrant a decided opinion on the subject. To many readers this circumstance will probably cause disappointment. For ourselves, we think they have judged wisely in this matter. Had they thought the evidence sufficiently strong to justify such an opinion, yet, on a question which has called forth so much discussion, and in regard to which the facts have been constantly before the eyes of the public, it could not be expected that the dictum of any body of men, however respectable, would be regarded as conclusive, even if they could cordially unite in the expression of the same opinion. But supposing this unanimity not to exist, the minority as well as the majority would probably feel it to be due to themselves to avow their opinion, and both parties would thus in fact appeal to the judgment of the public whom they profess to make it their purpose to enlighten. The best mode, undoubtedly, is to state with candor and impartiality the facts and arguments which bear on the opposite sides of the question, and then to leave readers to judge for themselves.

There is but one idea embraced in the conclusion of this part of the Report, which appears to us to lie open to fair criticism. It is, that, whatever be the mode of propagation of cholera, that mode can only with propriety be regarded as single. Such, if we understand it, is the purport of the language. Now it appears to us that if there be in fact two distinct modes of propagation, which may be conceived as possible, and if of the phenomena which are known and admitted, a part admit of explanation by adopting one of these modes, and another part being at variance with this, gives countenance to the other, it is at least not absurd to believe that the disease has actually been propagated in both. Now such does seem to be the state of the case in regard to contagion and infection, viewed as means of extending the present epidemic. But the tendency of the language held by the Report is, if we understand it, to confound these two sources in one, by making the contagion independent of contact, and by enlarging indefinitely the sphere of its action; and thus to reduce the non-contagionists to the choice between locally generated terrestrial miasm as the cause of the disease, and a tertium quid, the nature of which is wholly unknown, except as involving a negation of the two others. In this sense we should not only be willing to consider contagion a more probable cause than either of the other two, but as adequate to explain all the facts in the case. But we apprehend that the rigid contagionist will not be satisfied to have his doctrine interpreted in so liberal a sense. In other words, those who view cholera as strictly contagious in its character, intend to be understood, as subjecting it to the same laws which govern smallpox; and it is the inadequacy of

this view to explain all the phenomena of its propagation, while it corresponds very well with a large part of these phenomena, which has led many others, as well as ourselves, to endeavor to reconcile the opposite theories, by avoiding the exclusive character of both. Whether this view of the subject is preferable to that adopted in the Report, or whether they differ by more than a verbal distinction, we would rather that our readers should determine for us.

The author of an article in the *North American Review* for July, written expressly and avowedly to support the doctrine of the non-contagiousness of the disease, appears not only to have fallen into, but absolutely to have built upon, the error we have pointed out. "We shall not notice," says he, "the opinion of those who attribute it to a combination of these two causes, as it is unphilosophical to assign two causes for an effect, when one is sufficient to account for it." A bullet through the heart, to use the apt illustration of a respected correspondent, is certainly sufficient to account for the death of a man; but is it therefore unphilosophical to hold that death may be caused by drowning, lightning, or the cholera? The rays of the sun are a sufficient cause of light and heat; is it therefore unphilosophical ever to attribute them to electricity, or any chemical combination? A word from the author to his horse will probably make him go; but does it follow that the stroke of a whip on his back cannot produce the same effect? It must, we apprehend, be clear to every one, that the rule in question is not one of universal application, and therefore not a sufficient foundation for an argument in the present case. Apart from this, we may remark, that the article in the *Review*, which is from the pen of a medical gentleman whose opinions on the subject are decided, presents a concise view of the facts and arguments which oppose the idea of the contagiousness of the cholera, and is recommended to the perusal of the faculty generally.

Although the discussion of the mode of propagation of the disease is made by its importance to occupy more than one half of the Report, the question to which it constitutes the answer is but one of eleven which were submitted to the consideration of the Committee. The remaining ten we can conveniently name, and two or three of them consider in order, as they form a regular numerical series, numbered from one to ten,—the one already alluded to being a duplicate of No. 5.

The 1st inquiry is the following: Under what circumstances, and in what place, did the epidemic originate?—On this subject we have a valuable extract from Mr. Jameson's Report to the Government of Bengal, drawn up in 1820, the details of which go to show, that, at the outset, its appearance in different parts of India was simultaneous or nearly so, and such as to furnish no reason for supposing it to be propagated from one position to another, until the year 1818. At this period, without quitting the provinces in which it was already established, it began to spread more widely, and its extension to be governed by fixed laws. The lines in which it passed were sometimes determined by the course of the principal rivers, at others by the great roads, and occasionally it followed the routes of large armies. It seldom remained long in one place, its duration varying from two to six weeks. It avoided in a great measure the hilly country, and seemed often to be arrested by a range of mountains. It was more fatal to Indians than to Europeans, a circumstance apparently connected with the privations and poverty of the former.

2. What are the symptoms of the Spasmodic Cholera, their course and order?

3. What are the post mortem appearances in patients dying of Cholera ?

4. Is Spasmodic Cholera a new disease ?

The Committee conclude, and we think rightly, that in comparing the Asiatic disease, as described with cholera as known to us, the two appear essentially the same ; but that the Indian disease is distinguished as an epidemic by its extensive prevalence, by the violence and intensity of its symptoms, by the rapidity of its course, and by its fatality. There is sufficient evidence that the European and Asiatic disease are identical.

5. What is the proximate cause of Spasmodic Cholera ?

The Committee regard the disease as acting like a poison on the constitution, producing depression of the vital powers, such as ordinarily to prevent reaction. The spasms which mark the disease, may be regarded as an indication of the prostration of the muscular forces, and are similar in their character to those which ensue on the powerful operation of antimonial medicine. At the same time that it produces this depression, the poison violently and suddenly stimulates the alimentary canal, and thus produces the evacuations. Other remarkable changes which occur in the system, are, the failure of the urinary and hepatic secretions ; and the dyscrasis of the blood, which loses in a degree its fluidity, and becomes darker than in health in all the vessels.

6. Diagnosis of Cholera.

7. Prognosis in Cholera.

8. Treatment.—The most important indication in the treatment of cholera, is to remove the obstacles which exist to the free action of the heart, and to excite this organ to vigorous and steady efforts. To fulfil this indication, it is not sufficient, in the opinion of the Committee, to employ stimulants. At the same time that the power of the organ is augmented, it is also desirable to diminish the amount of the mass on which it is to exert its action. By this consideration is suggested the propriety of blood-letting, and the utility of this measure they believe to be confirmed by experience. The testimony of the Indian Reports, viz. that of Bengal, by Mr. Jameson ; that of Madras, by Mr. Scott ; and that of Bombay, all go to show the efficacy of this remedy. Mr. Annesley and Mr. Bell also regard bloodletting as the most important part of the treatment. Emetics have likewise been employed to arouse the powers of the circulation, and in many instances with good effect. Other important indications are to quiet action and relieve pain in the stomach and bowels, and to promote the biliary secretion. The means of effecting these, and the general plan of treatment to be pursued, are detailed in the Report at considerable length, and will form to the practical physician one of the most interesting portions.

9. What measures should be used to prevent the introduction of Cholera into this country ?—Under this head, the Committee report a plan of quarantine regulations, based on the supposition that the disease always makes its appearance within seven days after it is communicated, and that no vessel ought to be detained, on board of which no disease has existed for ten days previous to her arrival. When disease actually exists, or has been present within this period, the vessel should be subjected to a rigid quarantine, and no communication whatever should be allowed with the shore till the period of danger has passed. No restrictions should be imposed on the landing of merchandize from a diseased port, with the single exception of the article of rags. Clothing which has been worn by the sick, ought to be subjected to the common modes of purification.—However judicious these precautions appear in themselves, and

however cautious the reasoning on which they are founded, it is evident that they have seldom been fully adopted with the rigor recommended by the Committee. At all events, that the disease has been propagated with a rapidity almost without example, and that in its progress it has sometimes at least appeared to be governed by the laws which usually regulate contagious epidemics, will hardly be disputed by a candid observer; but whether it has been in strict conformity with these same laws, can be better proved when, after the subsidence of the existing excitement, all the facts in the case shall be accurately known, and fairly and impartially compared.

10. What measures ought to be taken in case the Spasmodic Cholera shall appear among us?—With a mere statement of this query, in answer to which the Committee have anticipated most of the important measures of police which have recently been recommended and adopted, we shall close our notice of the Report. However deplorable the events which have rendered necessary the performance of this task, we shall all join in rejoicing that it has been so ably performed; and whether the present scourge is destined to visit us or not, the information contained in the present work, and the philosophical views which it suggests, will not fail to have a permanent value in the eyes of the profession, to whom it is again recommended in the same terms in which we briefly noticed it the last week.

THE CHOLERA IN CANADA.

THE cholera, we are happy to announce, is almost entirely subsided at Montreal and Quebec, though cases are occurring in the vicinity of those places. At the suggestion of Mr. Clay, the Senate of the United States has voted to request the President to appoint a day of general humiliation and prayer to Almighty God, that He may in His mercy avert from our country the Asiatic Scourge which is now traversing and devastating other countries; and that should it be among the dispensations of His Providence to inflict this scourge upon our land, that it may please Him, in His mercy, so to ameliorate the infliction, as to render its effects less disastrous among us, than they have proved among the nations which it has heretofore visited.

The Governor of Maryland has designated THIS DAY for a similar purpose, in that State. Our sentiments on such a measure were expressed on page 93 of our last volume.

We are compelled, by want of room, to defer several valuable Communications.

Whole number of deaths in Boston for the week ending June 29, 96. Males, 15—Females, 11—Still-born, 1.

Croup, 2—consumption, 6—scarlet fever, 3—convulsions, 1—dropsy, 2—rheumatic, 1—measles, 1—infantile, 2—drowned, 1—throat distemper, 1—intemperance, 1—unknown, 1—suicide, 1—typhus fever, 1—affection of the brain, 1.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

IS PRINTED AND PUBLISHED EVERY WEDNESDAY, BY CLAPP AND HULL,

At 184 Washington Street, corner of Franklin Street, to whom all communications must be addressed, *Post-paid*. It is also published in Monthly Parts, on the 1st of each month, each Part containing the numbers of the preceding month, stitched in a cover.—Price \$3.00 per annum in advance, \$3.50 if not paid within six months, and \$4.00 if not paid within the year.—*Postage the same as for a newspaper.*